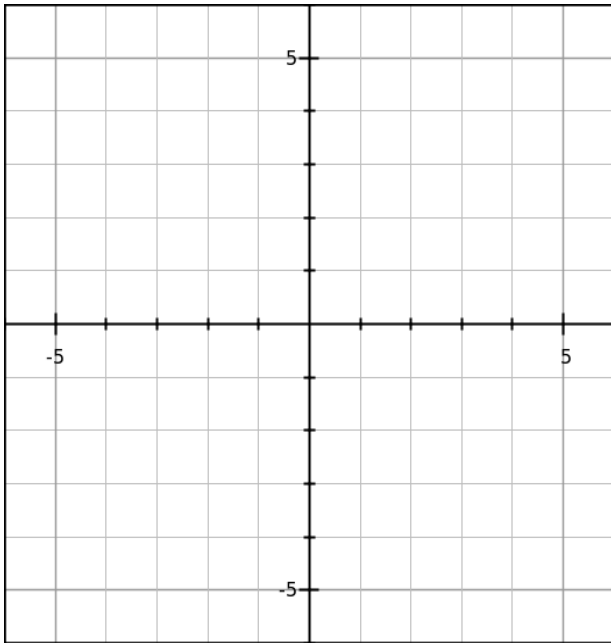
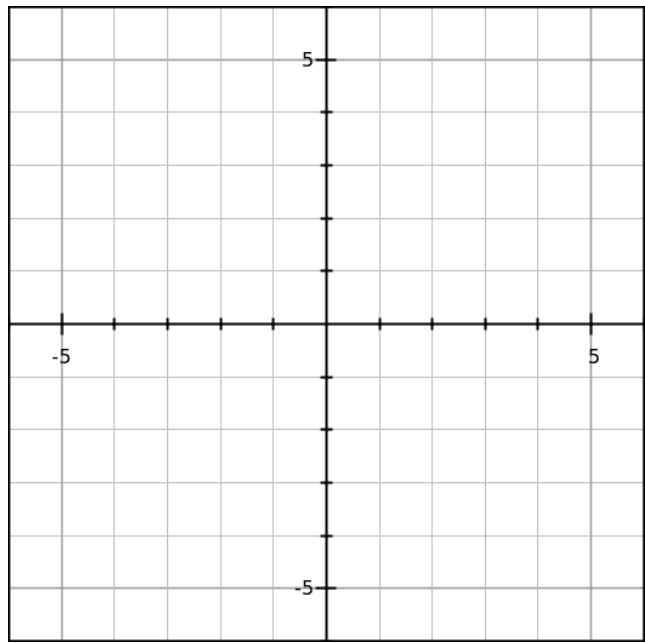


Solve by graphing



$$\begin{aligned} 3x + 2y &= 4 \\ -x + 3y &= -5 \end{aligned}$$



$$\begin{aligned} x + y &= -2 \\ 2x - 3y &= -9 \end{aligned}$$



7.2 Solving Linear Systems with Substitution DAY 1

STEP 1 Pick 1 equation and solve for 1 variable

Substitute expression from step 1 into the other original equation and solve

STEP 2

STEP 3 Substitute value from step 2 into any other equation & solve

Write answer as an ordered pair. Put in alphabetical order if variables are not x & y

STEP 4

STEP 5 Check solutions with both equations

Solve the System



$$3x - y = 10$$

$$2x - 3y = 9$$

Solve with substitution and check!

$$\ast y = 6x - 11$$

$$\ast -2x - 3y = -7$$

$$-2x + 3(6x - 11) = -7$$

$$-2x + 18x + 33 = -7$$

$$-20x + 33 = -7$$

$$\begin{array}{r} -33 \\ -20x + 33 = -7 \\ \hline -20x = -40 \end{array}$$

$$\begin{array}{r} -20x = -40 \\ \hline -20 \quad -20 \\ \hline x = 2 \end{array}$$

$$x = 2$$

(2, 1)

$$\begin{array}{l} y = 6x - 11 \\ y = 6(2) - 11 \\ y = 12 - 11 \\ y = 1 \end{array}$$

Solve with substitution and check!

2. $y = -2$
 $4x - 3y = 18$

$(_, -2)$



Solve with substitution and check!

**3. $-7x - 2y = -13$
 $x - 2y = 11$**



Solve with substitution and check!

4. $2x + y = 20$

$6x - 5y = 12$

$y = -2x + 20$

$6x + 5(-2x + 20) = 12$

$6x + 10x + -100 = 12$

$16x + -100 = 12$

$+100 +100$

$16x = 112$

$16 \quad 16$

$x = 7$

$y = -2(7) + 20$

$y = -14 + 20$

$y = 6$

(7, 6)

Homework:

★ WARM UP ★

★1. Solve by graphing ★

$$y = 3x - 4$$

$$y + 3x = 2$$

★2. Solve with substitution ★

$$2x + y = 20$$

$$6x - 5y = 12$$

**Check
#1**

**Check
#2**

Solve with substitution

**1. $2x + 6y = 15$
 $x = 2y$**

Check

$$\begin{array}{l} 2. \quad 3x + y = 3 \\ \quad 7x + 2y = 1 \end{array}$$

Check
 $(-5, 18)$